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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,512	09/14/2001	Jun Fukuda	DAIN:647	4263
7590 11/20/2003 Parkhurst & Wendel Suite 210 1421 Prince Street Alexandria, VA 22314-2805			EXAMINER MERCADO, JULIAN A	
			ART UNIT 1745	PAPER NUMBER

DATE MAILED: 11/20/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application N</b> 09/936,512	<b>Applicant(s)</b> FUKUDA ET AL.	
	<b>Examiner</b> Julian A. Mercado	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 12-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 10 and 11 is/are allowed.
- 6) ☐ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> | 6) <input type="checkbox"/> Other:  |

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## DETAILED ACTION

### *Remarks*

This Office Action is responsive to applicant's amendment filed October 29, 2003.

Claims 1-21 are pending. Claims 12-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5.

Applicant's election with traverse of Group I in Paper No. 5 is acknowledged. The traversal is on the ground(s) that a thorough and complete search of the elected claims would necessarily encompass a thorough and complete search for the subject matter of the non-elected claims. This is not found persuasive because the non-elected claims 12-21 further recite features such as corrugations and cuts of the workpiece, *inter alia*, features which are not within the scope of elected claims 1-11. Additionally, the non-elected claims 12-21 do not recite heat-sealing or heat-sealing of a pouch package *per se*, such feature being exclusively found only in elected claims 1-11.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 5-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al.. (JP 61-198550)

Regarding independent claim 1, Suzuki et al. teaches a heat-sealing machine comprising a pair of sealing heads [9, 9'] wherein both the sealing surfaces thereof are provided with a recess which corresponds to tabs [1,1']. (Figure 11, see par. 6, interpretation of which is based on an oral translation within the USPTO, also applies to dependent claim 2) The tabs [1, 1'] are thermally fused, i.e. heat-sealed with a coating resin [2,2'] and are located at the end of a package [8].

The examiner notes that a fair reading of applicant's disclosure appears to be drawn to heat-sealing of a pouch package, however the scope of independent claim 1 merely recites that the tabs are located at the end of the package. In this respect, the heat-sealing effect of the heat-sealing machine does not presently preclude thermal fusing or heat-sealing of the resin [2,2'] along tabs [1,1'].

As to dependent claims 5-9, these claims have not been given patentable weight as the limitations recited in these claims are directed to a laminated structure and therefore fail to further limit or give breadth and meaningful scope to the claimed "heat-sealing machine".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. as applied to claims 1, 2 and 5-9 above.

The teachings of Suzuki et al. are discussed above.

As to the depth and width of the recesses, absent of unexpected results it is asserted that these are optimizable parameters for result-effective variables. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) The depth and width of the recess would be an obvious operational parameter to optimize in order to allow for sufficient clearance for the tabs [1, 1'] and for proper thermal fusion contact with the coating resin [2,2']. See MPEP 2115.

#### ***Allowable Subject Matter***

Claims 10 and 11 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record and to the examiner's knowledge do not teach or render obvious at least to the skilled artisan the instant invention regarding heat-sealing the unsealed part of a pouch package, with the unsealed part having a tab of a polymer battery therein, with at least one of a pair of sealing heads being provided with a recess in a part corresponding to the tab.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. 6,207,318 B1 teaches sealing tabs with a recess for sealing of a polymer battery module. (Figure 4b) The sealing is pressure application via bolts [60, 62]. (col. 5 line 14-18)

U.S. Pat. 5,563,007 teaches heat-sealing of battery plates with a heated die. The heat-sealing with the heated die is not taught or suggested using a pair of sealing heads being provided with a recess in a part corresponding to the battery tab.

U.S. Pat. 3,775,189 to Jaggard teaches application of heat to a battery laminate structure via a housing member [11,12,13], the housing member. (col. 3 line 8-11 and line 42-47)

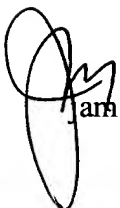
U.S. Pat. 3,671,709 is cited of cumulative relevance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511.

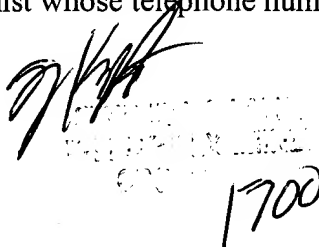
The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



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